Claims

The claimed invention is:

1. A video display device comprising:

    a display configured to display a primary image and a picture-in-picture image (PIP) overlaying the primary image;

    a processor operatively coupled to the display and configured to receive a first video data stream for the primary image, to receive a second video data stream for the PIP, and to change a PIP display characteristic in response to a received audio indication and a related gesture from a user.

2. The video display device of Claim 1, wherein the PIP display characteristic is at least one of a position of the PIP on the display and a display size of the PIP.

3. The video display device of Claim 1, comprising:

    a microphone for receiving the audio indication from the user; and

    a camera for acquiring an image of the user containing the related gesture.

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1 4. The video display device of Claim 1, wherein the processor

2 is configured to analyze audio information received from the

3 user to identify when a PIP related audio indication is intended

4 by the user.

1 5. The video display device of Claim 1, wherein the processor

2 is configured to analyze image information received from the

3 user after the audio indication is received to identify the

4 change in the PIP display characteristic that is expressed by

5 the received gesture.

1 6. The video display device of Claim 5, wherein the image

2 information is contained in a sequence of images and wherein the

3 processor is configured to analyze the sequence of images to

4 determine the received gesture.

1 7. The video display device of Claim 1, wherein the image

2 information is contained in a sequence of images and wherein the

3 processor is configured to determine the received gesture by

4 analyzing the sequence of images and determining a trajectory of

5 a hand of the user.

1 8. The video display device of Claim 1, wherein the processor

2 is configured to determine the received gesture by analyzing an

3 image of the user and determining a posture of a hand of the

4 user.

1 9. The video display device of Claim 1, wherein the video

2 display device is a television.

1 10. The video display device of Claim 1, wherein the image is a

2 sequence of images of the user containing the user gesture, the

3 video display device comprising a camera for acquiring the

4 sequence of images of the user.

1 11. A method of controlling a display characteristic of a

2 picture-in-picture display (PIP) overlaying a primary display,

3 the method comprising:

4   receiving an audio indication from a user;

5   determining whether the received audio indication is one of

6 a plurality of expected audio indications;

7   analyzing a gesture of the user if the received audio

8 indication is one of the plurality of expected audio

9 indications; and

10   controlling the display characteristic if the gesture is a

11 gesture related to the received audio indication.

1   12. The method of Claim 11, wherein analyzing the gesture

2 comprises:

3   receiving a sequence of images; and

4   analyzing the sequence of images to determine the gesture.

1   13. The method of Claim 11, wherein analyzing the gesture

2 comprises:

3   receiving a sequence of images;

4   analyzing the sequence of images to determine a trajectory

5 of a hand of the user; and

6   determining the gesture by the determined trajectory.

1   14. The method of Claim 11, wherein analyzing the gesture

2 comprises:

3   analyzing an image of the user to determine a posture of a

4 hand of the user; and

5   determining the gesture by the determined posture .

1   15. A program segment stored on a processor readable medium for

2 controlling a display characteristic of a picture-in-picture

3   display (PIP) overlaying a primary display, the program segment

4   comprising:

5   a program segment for controlling receipt of an audio

6   indication;

7   a program segment for determining whether a received audio

8   indication is one of a plurality of stored audio indications;

9   a program segment for analyzing a gesture of the user if

10 the received audio indication is one of the plurality of stored

11 audio indications; and

12   a   program   segment   for   controlling   the   display

13 characteristic   if   the   gesture   is   a   gesture   related   to   the

14 received audio indication.

1   16. The program segment of Claim 15, wherein the program

2   segment for analyzing the gesture comprises:

3   a program segment for controlling receipt of a sequence of

4   images; and

5   a program segment for analyzing the sequence of images to

6   determine the gesture.

1   17. The program segment of Claim 15, wherein the program

2   segment for analyzing the gesture comprises:

3 a program segment for controlling receipt of a sequence of

4 images;

5 a program segment for analyzing the sequence of images to

6 determine a trajectory of a hand of the user; and

7 a program segment for determining the gesture by the

8 determined trajectory.

1 18. The program segment of Claim 15, wherein the program

2 segment for analyzing the gesture comprises:

3 a program segment for analyzing an image of the user to

4 determine a posture of a hand of the user; and

5 a program segment for determining the gesture by the

6 determined posture.

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3 a program segment for controlling receipt of a sequence of

4 images;

5 a program segment for analyzing the sequence of images to

6 determine a trajectory of a hand of the user; and

7 a program segment for determining the gesture by the

8 determined trajectory.

1 18. The program segment of Claim 15, wherein the program

2 segment for analyzing the gesture comprises:

3 a program segment for analyzing an image of the user to

4 determine a posture of a hand of the user; and

5 a program segment for determining the gesture by the

6 determined posture.